

1/7

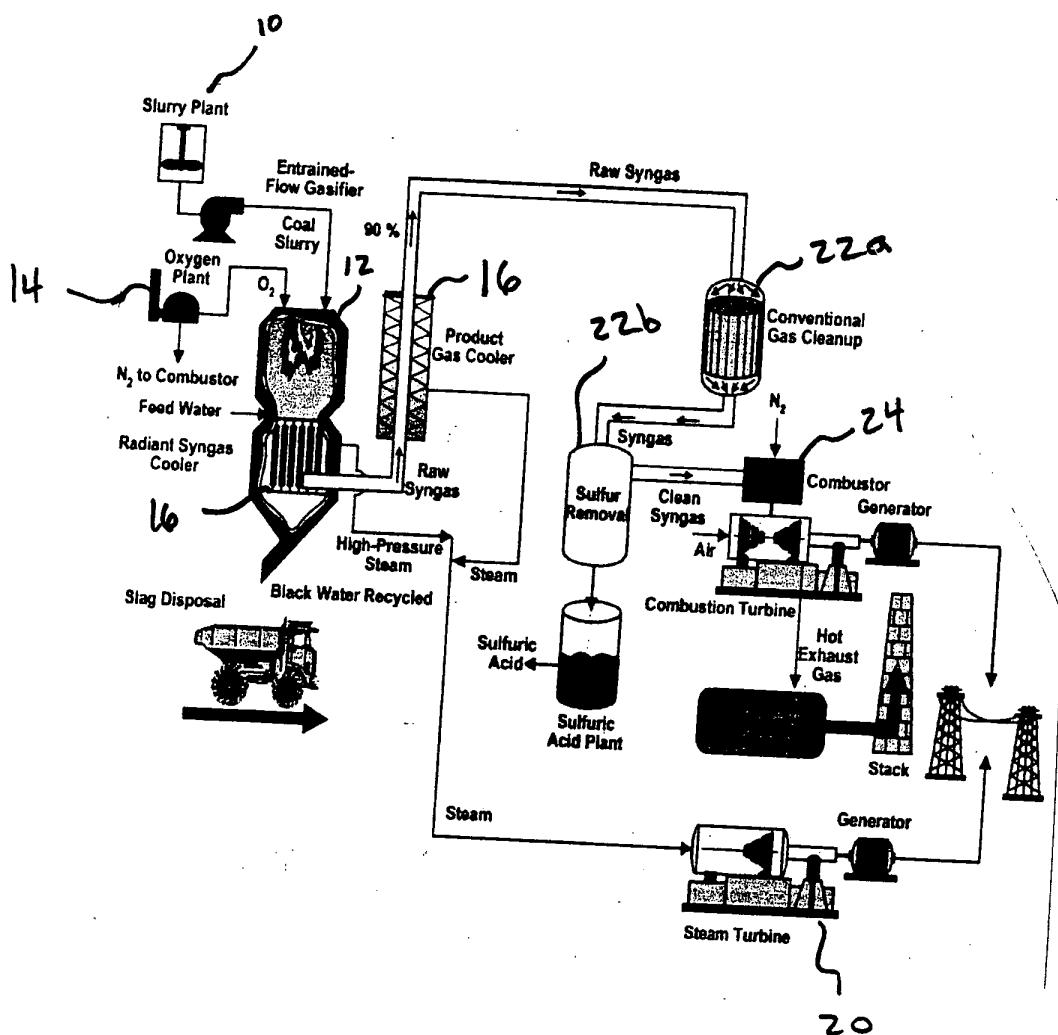


Figure 1

2/7

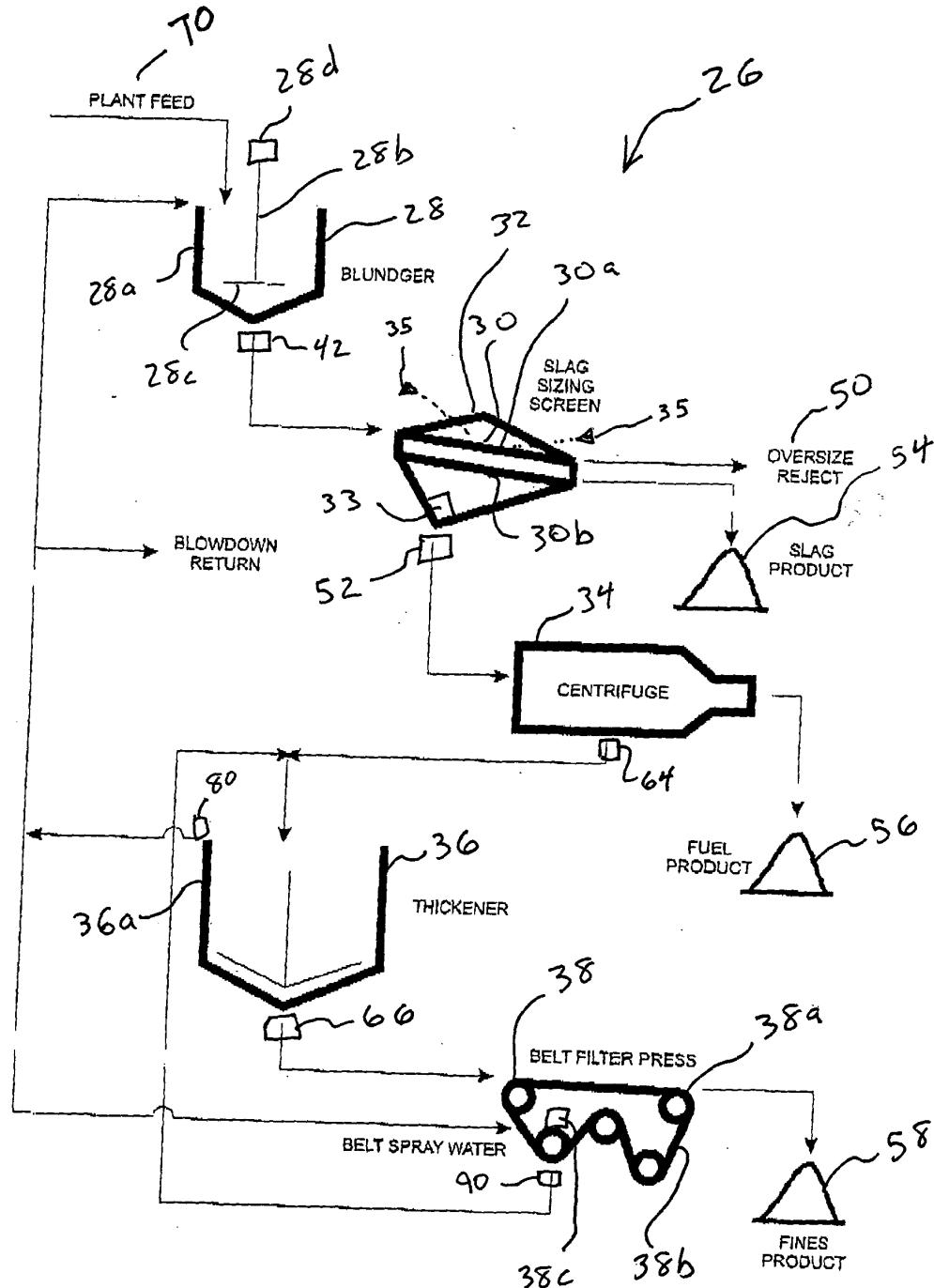


Figure 2

3/7

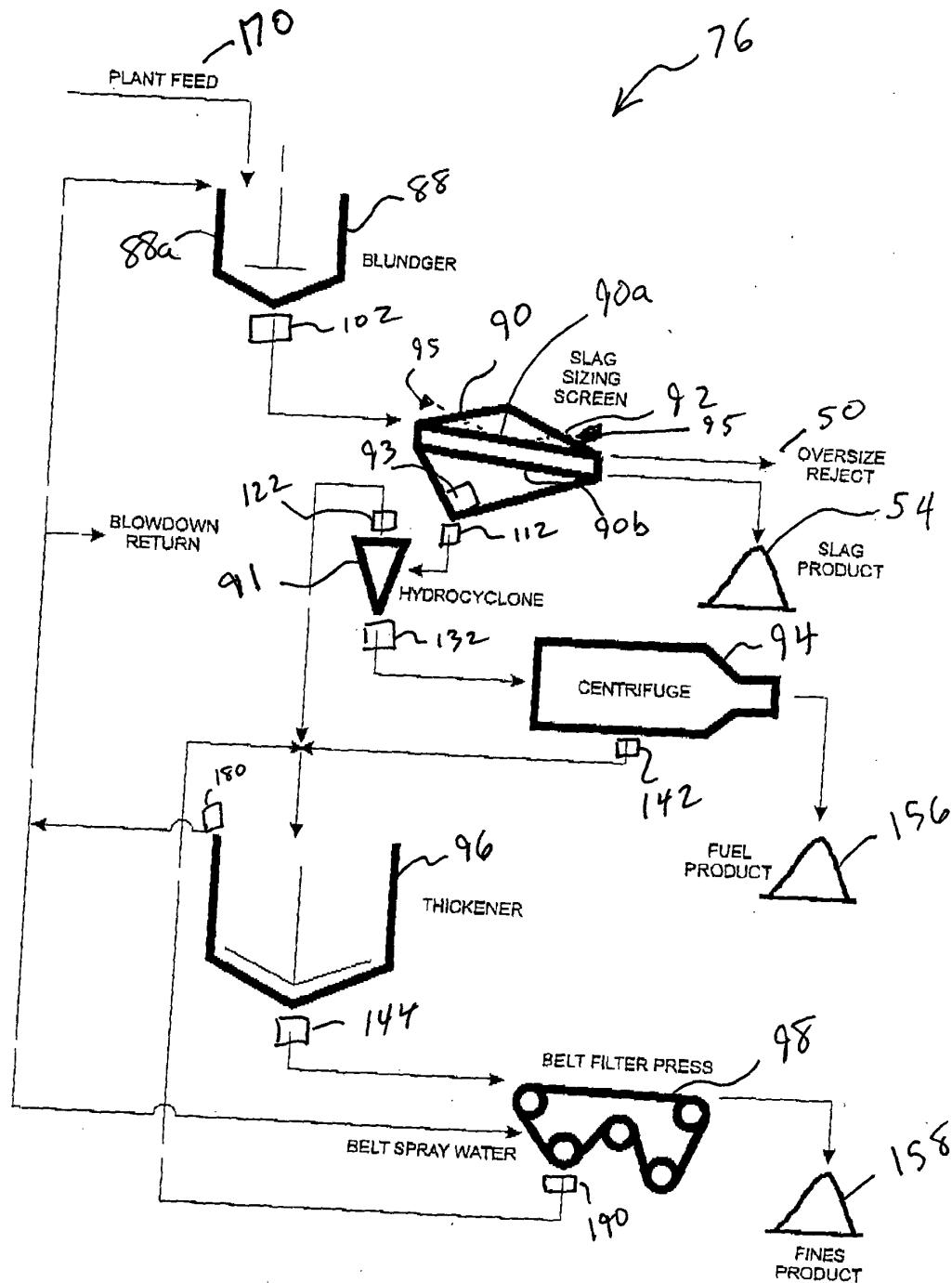


Figure 3

Title. METHOD AND SYSTEM FOR BENEFICIATING
GASIFICATION SLAG
Inventor(s): Price et al.
Application No: To be assigned
Atty Dkt No: 046478.257670

4/7

Size Fraction (inches or mesh)	Weight %	LOI (%)
+1/2	0.20	45.00
-1/2+1/4	0.30	22.55
-1/4+4	0.36	9.63
-4+6	2.64	2.09
-6+20	29.11	1.20
-20+30	4.63	60.11
-30+40	6.91	65.17
-40+50	9.42	68.74
-50+60	4.86	62.47
-60+80	6.68	56.25
-80+100	4.01	32.28
-100+200	11.53	31.42
-200+325	6.02	27.74
-325	13.32	30.55
Total	100.00	31.81

Figure 4

Size Fraction (mesh)	Weight %	LOI (%)	LOI Distribution (%)
Second Portion - 4+20	32.6	1.83	1.9
Third Portion - 20+80	32.5	63.25	64.6
Fourth Portion - 80	34.9	30.55	33.5
Total	100	31.81	100.0

Figure 5

Title. METHOD AND SYSTEM FOR BENEFICIATING
GASIFICATION SLAG
Inventor(s): Price et al.
Application No: To be assigned
Atty Dkt No: 046478.257670

5/7

Size Fraction (mesh)	Size Fraction (microns)	Weight %	LOI %
12	+1410	63.4	0.15
-12+20	-1410+841	33.3	0.57
-20	-841	3.3	0.74
Total		100	0.31

Figure 6

Size Fraction (mesh)	Size Fraction (microns)	Weight %	LOI %
+20	+841	0.7	4.6
-20+80	-841+177	84.2	68.4
-80	-177	15.1	30.5
Total		100.0	63.22

Figure 7

Size Fraction (mesh)	Size Fraction (microns)	Weight %	LOI %
+100	+150	11.5	32.3
-100+200	-150+74	33.0	31.4
-200+325	-74+44	17.3	27.7
-325	-44	38.2	30.6
Total		100.0	30.5

Figure 8

6/7

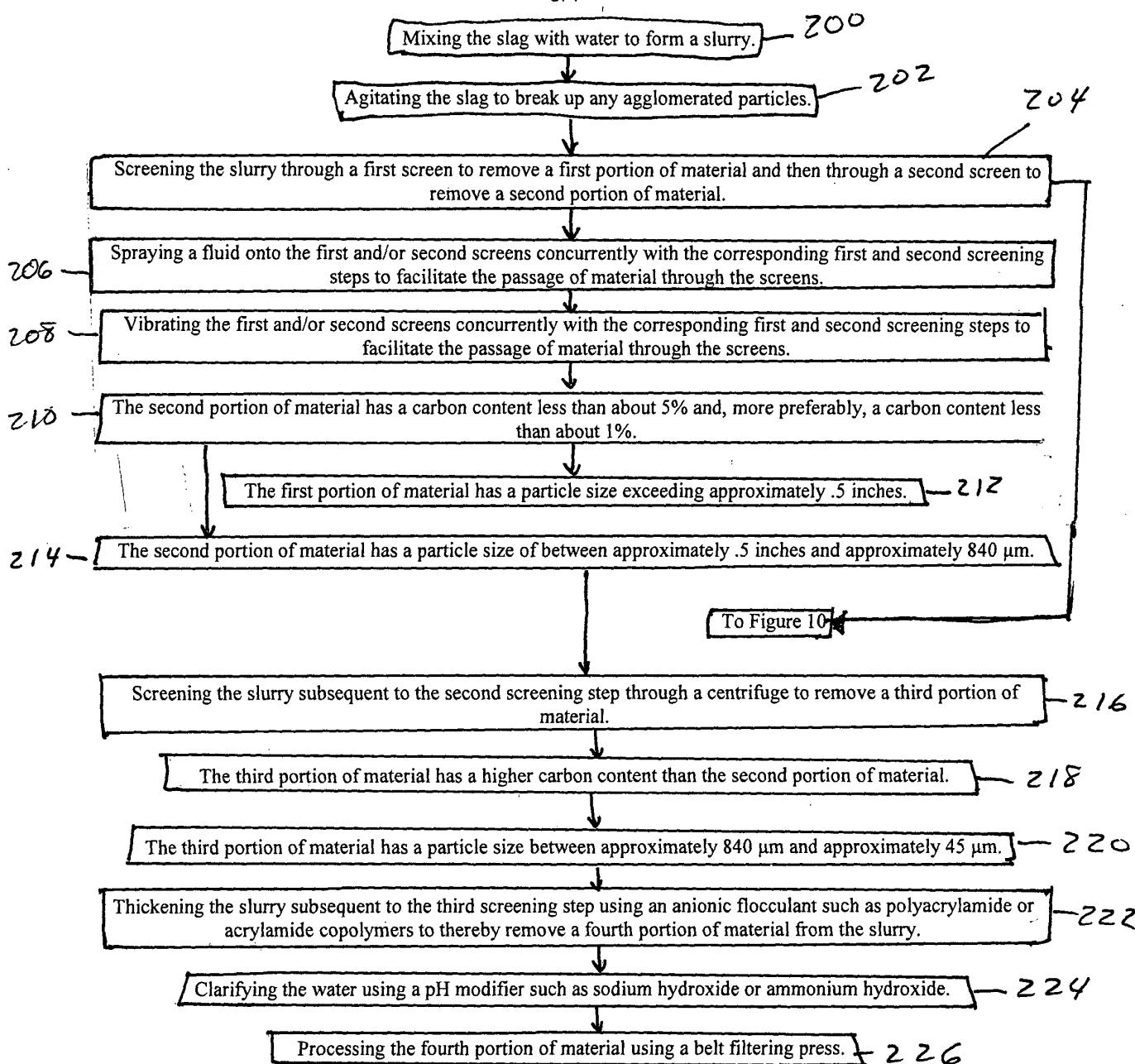


FIGURE 9

7/7

From Figure 9

Screening the slurry subsequent to the second screening step using a hydrocyclone to remove a third portion of material.

- 228

The third portion of material has a higher carbon content than the second portion of material.

- 230

The third portion of material has a particle size of between approximately 840 μm to approximately 75 μm .

- 232

Dewatering the third portion of material or "underflow" from the hydrocyclone using a centrifuge.

- 234

Subsequent to the third screening step, processing the slurry by thickening the slurry using an anionic flocculant such as polyacrylamide or acrylamide copolymers to thereby remove a fourth portion of material from the slurry.

- 236

Clarifying the water using a pH modifier such as sodium hydroxide or ammonium hydroxide.

- 238

Processing the fourth portion of material using a belt filtering press.

- 240

FIGURE 10